

Notice of Allowability

Application No.

09/404,047

Examiner

Rip A. Lee

Applicant(s)

IYER ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to July 15, 2004.
2. ☒ The allowed claim(s) is/are 22-46, 59 and 60.
3. ☒ The drawings filed on September 23, 1999 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

This notice of allowance follows a response filed on September 15, 2004. Applicants have canceled claims 1-21 and 58. Claims 22-46, 59, and 60 remain.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Claim 22 has been amended as follows:

Line 2 delete "the pressure sensitive adhesive of claim 1"

Line 2 replace the deleted term "the pressure sensitive adhesive of claim 1" with
 the following:

"a pressure sensitive adhesive comprising a copolymer which comprises: (a) a major amount of at least one acrylate or methacrylate ester; (b) from about 8% to about 30% by weight of at least one nitrogen containing monomer; (c) from about 0.5% to about 15% by weight of at least one unsaturated carboxylic acid; and (d) at least one cross linkable monomer"

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance: Claims 22-46, 59, and 60 are allowed over the closest references, U.S. Patent No. 4,812,541 to Mallya *et al.*, U.S. Patent No. 5,639,811 to Plamthottam *et al.*, and U.S. Patent No. 5,612,136 to Everaerts *et al.*

The present invention is drawn to a pressure sensitive adhesive comprising a blend of (1) a pressure sensitive adhesive comprising a copolymer which comprises: (a) a major amount of at least one acrylate or methacrylate ester; (b) from about 8% to about 30% by weight of at least one nitrogen containing monomer; (c) from about 0.5% to about 15% by weight of at least one unsaturated carboxylic acid; and (d) at least one cross linkable monomer and (2) a second pressure sensitive adhesive comprising (a) a major amount of at least one acrylate or methacrylate ester, (b) from about about 0.5% to about 10% by weight of at least one nitrogen containing monomer; (c) from about 0.5% to about 15% by weight of at least one unsaturated carboxylic acid; and (d) at least one cross linkable monomer.

Another aspect of the invention relates to a pressure sensitive adhesive blend of The present invention is drawn to a pressure sensitive adhesive comprising a blend of (1) a pressure sensitive adhesive comprising: (a) a major amount of at least one acrylate or methacrylate ester; (b) from about 8% to about 30% by weight of at least one nitrogen containing monomer; (c) at least one unsaturated carboxylic acid and (2) a second pressure sensitive adhesive comprising (a) a major amount of at least one acrylate or methacrylate ester, (b) from about about 0.5% to about 10% by weight of at least one nitrogen containing monomer; (c) at least one unsaturated carboxylic acid; and (d) at least one cross linkable monomer.

Mallya *et al.* teaches a copolymer comprised of (a) 55-85 % C₄₋₁₂ alkyl (meth)acrylate ester, (b) 1-10 % *N*-vinyl lactam, (c) 0-15 % unsaturated carboxylic acid, and (d) a crosslinkable, glycidyl monomer in 0.01-2 % by weight of the entire mixture. The composition also contains up to 35 % of C₁₋₄ alkyl (meth)acrylate ester. The adhesive copolymer has a glass transition temperature, T_g , less than about -15°C .

Plamthottam *et al.* claim a copolymer comprised of (a) 55-85 % C₄₋₁₂ alkyl (meth)acrylate ester, (b) 0-30 % *N*-vinyl lactam, (c) 0-15 % unsaturated carboxylic acid, (d) 0.01-2 % of a crosslinkable, glycidyl monomer, and (e) 0-35 % C₁₋₄ alkyl (meth)acrylate ester. The copolymer has a glass transition temperature, T_g , less than about -15°C . A tackifier is incorporated into the mixture, and use of plasticizers and other addenda is contemplated, as well as use of aluminum acetylacetonate as crosslinking agent.

Example 23 of Everaerts *et al.* reveals an adhesive composition comprised of 68 pw isooctyl acrylate, 31 pw of *N,N*-dimethyl acrylamide, 1 pw acrylic acid, and 0.8 pw of hexanediol diacrylate.

Although the cited references teaches a single component of the present invention, none of the cited references fairly suggests preparing a blend of adhesives. One of ordinary skill in the art would not have found it obvious to arrive at the subject matter of the present claims based on the teachings of the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 1713

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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October 5, 2004



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